

CLAIMS:

1. Multi-processor computer system comprising
 - at least two processors for parallel execution of processes,
 - at least two cache memory units, each being associated with and connected to a separate processor,
 - 5 - a connection bus connecting said processors and said cache memory units, and
 - a process list unit connected to said connection line for storing a process list of processes to be available for execution by said processors,wherein said processors are adapted for loading a global wake-up variable signalling process additions of processes to said process list into their associated cache memory unit, for
10 switching into a low-power mode if said process list contains no process for execution by said processors and for switching into a normal-power mode if said wake-up variable signals an addition of a process to said process list.
2. Multi-processor computer system as claimed in claim 1,
15 wherein said processors are adapted to switch into the normal-power mode if the wake-up variable held in the associated cache memory units is changed due to an addition of a process to said process list.
3. Multi-processor computer system as claimed in claim 1,
20 wherein said processors are adapted to execute a store command on the wake-up variable when adding a process to said process list.
4. Multi-processor computer system as claimed in claim 1,
wherein said processors are adapted to send a request to other processors to drop the wake-up
25 variable from their associated cache memory unit when adding a process to said process list.
5. Multi-processor computer system as claimed in claim 1,
wherein said computer system is adapted for implementing an invalidation based cache coherence protocol.

6. Processor for use in a multi-processor computer system comprising
- at least two processors for parallel execution of processes,
 - at least two cache memory units, each being associated with and connected to
- 5 a separate processor,
- a connection bus connecting said processors and said cache memory units, and
 - a process list unit connected to said connection line for storing a process list of
- processes to be available for execution by said processors,
- wherein said processor is adapted for loading a global wake-up variable signalling process
- 10 additions of processes to said process list into its associated cache memory unit, for switching
- into a low-power mode if said process list contains no process for execution by said
- processor and for switching into a normal-power mode if said wake-up variable signals an
- addition of a process to said process list .
- 15 7. Method of scheduling the execution of processes in a multi-processor
- computer system comprising
- at least two processors for parallel execution of processes,
 - at least two cache memory units, each being associated with and connected to
- a separate processor,
- 20 - a connection bus connecting said processors and said cache memory units, and
- a process list unit connected to said connection line for storing a process list of
- processes to be available for execution by said processors,
- said method comprising the steps of :
- loading a global wake-up variable signalling process additions of processes to
- 25 said process list by a processor into its associated cache memory unit,
- adding a process to said process list, and
 - changing the wake-up variable signalling said addition of a process to said
- process list thus causing said processor to switch from a low-power mode into a normal-
- power mode.
- 30 8. Method of executing a process by a processor in a multi-processor computer
- system comprising
- at least two processors for parallel execution of processes,
 - at least two cache memory units, each being associated with and connected to

a separate processor,

- a connection bus connecting said processors and said cache memory units, and
- a process list unit connected to said connection line for storing a process list of processes to be available for execution by said processors,

5 said method comprising the steps of :

- loading a global wake-up variable signalling process additions of processes to said process list into an associated cache memory unit,
- switching into a low-power mode if said process list contains no process for execution by said processor,
- 10 - switching into a normal-power mode if said wake-up variable signals an addition of a process to said process list, and
- accessing said process list to get said added process for execution.

9. Computer program comprising computer program code means for causing a

15 computer to perform the steps of the method as claimed in claim 7 or 8 if said methods are executed by said computer.

CLAIMS:

1. Multi-processor computer system comprising
 - at least two processors (1) for parallel execution of processes,
 - at least two cache memory units (2), each being associated with and connected to a separate processor (1),
 - 5 - a connection bus (4) connecting said processors (1) and said cache memory units (2), and
 - a process list unit (3) connected to said connection line (4) for storing a process list of processes to be available for execution by said processors (1),wherein said processors (1) are adapted for loading a global wake-up variable signalling process additions of processes to said process list into their associated cache memory unit (2),
10 for switching into a low-power mode if said process list contains no process for execution by said processors (1) and for switching into a normal-power mode if said wake-up variable signals an addition of a process to said process list.
- 15 2. Multi-processor computer system as claimed in claim 1, wherein said processors (1) are adapted to switch into the normal-power mode if the wake-up variable held in the associated cache memory units (2) is changed due to an addition of a process to said process list.
- 20 3. Multi-processor computer system as claimed in claim 1, wherein said processors (1) are adapted to execute a store command on the wake-up variable when adding a process to said process list.
4. Multi-processor computer system as claimed in claim 1,
25 wherein said processors (1) are adapted to send a request to other processors to drop the wake-up variable from their associated cache memory unit (2) when adding a process to said process list.
5. Multi-processor computer system as claimed in claim 1,

wherein said computer system is adapted for implementing an invalidation based cache coherence protocol.

6. Processor for use in a multi-processor computer system comprising
- 5 - at least two processors (1) for parallel execution of processes,
- at least two cache memory units (2), each being associated with and connected to a separate processor (1),
- a connection bus (4) connecting said processors (1) and said cache memory units (2), and
- 10 - a process list unit (3) connected to said connection line (4) for storing a process list of processes to be available for execution by said processors (1),
wherein said processor (1) is adapted for loading a global wake-up variable signalling process additions of processes to said process list into its associated cache memory unit (2),
for switching into a low-power mode if said process list contains no process for execution by
15 said processor and for switching into a normal-power mode if said wake-up variable signals an addition of a process to said process list .
7. Method of scheduling the execution of processes in a multi-processor computer system comprising
- 20 - at least two processors (1) for parallel execution of processes,
- at least two cache memory units (2), each being associated with and connected to a separate processor (1),
- a connection bus (4) connecting said processors (1) and said cache memory units (2), and
- 25 - a process list unit (3) connected to said connection line (4) for storing a process list of processes to be available for execution by said processors (1),
said method comprising the steps of :
- loading a global wake-up variable signalling process additions of processes to said process list by a processor (1) into its associated cache memory unit (2),
30 - adding a process to said process list, and
- changing the wake-up variable signalling said addition of a process to said process list thus causing said processor (1) to switch from a low-power mode into a normal-power mode.

8. Method of executing a process by a processor in a multi-processor computer system comprising

- at least two processors (1) for parallel execution of processes,
- at least two cache memory units (2), each being associated with and connected

5 to a separate processor (1),

- a connection bus (4) connecting said processors (1) and said cache memory units (2), and

- a process list unit (3) connected to said connection line (4) for storing a process list of processes to be available for execution by said processors (1),

10 said method comprising the steps of :

- loading a global wake-up variable signalling process additions of processes to said process list into an associated cache memory unit (2),

- switching into a low-power mode if said process list contains no process for execution by said processor (1),

15 - switching into a normal-power mode if said wake-up variable signals an addition of a process to said process list, and

- accessing said process list to get said added process for execution.

10. Computer program comprising computer program code means for causing a

20 computer to perform the steps of the method as claimed in claim 7 or 8 if said methods are executed by said computer.